



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D412-711-021
Job Sheet 196231



Part No: D412-711-021

Job Qty: 1 pcs

Part Name: Vertical Reference Door Modification LH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/10/19

Job Tracking No:

Due Date: 6/28/19

Created By: Marie Lajeunesse

Type: SOLD

Description: ORDER 14684

Note: DWG REV L IPP Rev:A 11.04.07 new issue DD verf:EC IPP Rev:B 14.04.25 ECN14-548 DD verf:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
120	Packaging 1 - Pick Kit	1 pcs		6/28/19	0.00	0.00	Packaging 1 - 1		
							Packaging 1 - 2		
							Packaging 1 - 3		
							Packaging 1 - 4		
							Packaging 1 - 5		
							Packaging 1 - 6		
							Packaging 1 - 7		
							Packaging 1 - 8		
							Packaging 1 - 9		
							Packaging 1 - 10		
							Packaging 1 - 11		
							Packaging 1 - 12		
							Packaging 1 - 13		
							Packaging 1 - 14		
							Packaging 1 - 15		
							Packaging 1 - 16		
							Packaging 1 - 17		
							Packaging 1 - 18		
							Packaging 1 - 19		
							Packaging 1 - 20		
							Packaging 1 - 21		
							Packaging 1 - 22		
							Packaging 1 - 23		
							Packaging 1 - 24		
							Packaging 1 - 25		
							Packaging 1 - 26		
							Packaging 1 - 27		
							Packaging 1 - 28		
							Packaging 1 - 29		
							Packaging 1 - 30		
							Packaging 1 - 31		

Plex 6/10/19 11:38 AM Dart.lajeunesse.marie

Plex 6/10/19 11:38 AM Dart.lajeunesse.marie

01/0362

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
AN3-12A	Bolt	2 1 Ea (1 ea)	120-Packaging 1 - Pick Kit	5133167
AN3-3A	Bolt	44 22 Ea (22 ea)	120-Packaging 1 - Pick Kit	5183164x24
AN3-4A	Bolt	40 20 Ea (20 ea)	120-Packaging 1 - Pick Kit	5187263
AN3-6A	Bolt	52 26 Ea (26 ea)	120-Packaging 1 - Pick Kit	5149149x20
CR3242-4-2	Rivet	68 34 Ea (34 ea)	120-Packaging 1 - Pick Kit	5049831
D3802-1-120	Window Seal - 120"	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5187628
D4165-1	Doubler	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5046795
D4165-11	Door Cover Panel	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5052205
D4165-3	Inner Door Panel	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5195413
D4165-5	Aft Rib	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5195340
D4165-7	Fwd Rib	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5195352
D4165-9	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5195267
D4207-1	Window Retainer	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5052320
D4207-3	Instrument Window	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5174912
D4269-1	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5181418
D4269-3	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5153385
D4269-5	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5153516
D4269-7	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5158980
D4324-011	Armrest Assembly	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5196631
D4327-1	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5163498
D4327-3	Angle	2 1 pcs (1 ea)	120-Packaging 1 - Pick Kit	5163504
D4385-1	Placard	4 2 pcs (2 ea)	120-Packaging 1 - Pick Kit	5168986
MS20426AD3-3	Rivet	270 135 Ea (135 ea)	120-Packaging 1 - Pick Kit	5018535-7x119
MS20426AD4-3	Rivet	280 140 Ea (140 ea)	120-Packaging 1 - Pick Kit	FM137597-7
MS20470AD3-3	Rivet, Universal Head	50 25 Ea (25 ea)	120-Packaging 1 - Pick Kit	F169411
MS20470AD4-3	Rivet, Universal Head	180 90 Ea (90 ea)	120-Packaging 1 - Pick Kit	5080639
MS21042L3	Nut	48 24 Ea (24 ea)	120-Packaging 1 - Pick Kit	5166712
MS21059L3	Nut Plate	8 4 Ea (4 ea)	120-Packaging 1 - Pick Kit	5168249
MS21069L08	Anchor Nut	16 8 Ea (8 ea)	120-Packaging 1 - Pick Kit	F123528-70
MS21069L3	Anchor Nut	68 34 Ea (34 ea)	120-Packaging 1 - Pick Kit	5158310
MS21071L08	Anchor Nut	2 1 Ea (1 ea)	120-Packaging 1 - Pick Kit	F103447
MS21071L3	Anchor Nut	6 3 pcs (3 ea)	120-Packaging 1 - Pick Kit	5055950
NAS1149F0332P	Washer	184 92 Ea (92 ea)	120-Packaging 1 - Pick Kit	5167104
D412-711-101	Replacement Vertical Reference Window	2 1 pcs (1 ea)	130-QC 4	5196652
D412-761-043	Modified Latch Mechanism, LH - Vertical Reference	2 1 pcs (1 ea)	130-QC 4	

5152072

5149185

5018535
x151

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
120-Packaging 1 - Pick Kit	AN3-12A	1	215	0
	AN3-3A	22	190	0
	AN3-4A	20	550	0
	AN3-6A	26	250	0
	CR3242-4-2	34	201	0
	D3802-1-120	1	0	0
	D4165-1	1	3	0
	D4165-11	1	2	0
	D4165-3	1	1	0
	D4165-5	1	0	0
	D4165-7	1	0	0
	D4165-9	1	0	0
	D4207-1	1	4	0
	D4207-3	1	4	0
	D4269-1	1	9	0
	D4269-3	1	4	0
	D4269-5	1	4	0
	D4269-7	1	3	0
	D4324-011	1	1	0
	D4327-1	1	6	0
	D4327-3	1	5	0
	D4385-1	2	13	0
	MS20426AD3-3	135	7,420	0
	MS20426AD4-3	140	2,545	0
	MS20470AD3-3	25	6,114	0
	MS20470AD4-3	90	4,206	0
	MS21042L3	24	1,770	0
	MS21059L3	4	266	0
	MS21069L08	8	349	0
	MS21069L3	34	202	0
	MS21071L08	1	137	0
	MS21071L3	3	64	0
	NAS1149F0332P	92	3,153	0
	D412-711-101	1	3	0
	D412-761-043	1	0	0
Specifications could not be found.				
Part Specifications				

Plex 6/10/19 11:38 AM Dart.lajeunesse.marie

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

QTY -011	QTY -013	QTY -015	QTY -017	QTY -019	QTY -021	QTY -041	PART NUMBER	DESCRIPTION
					22	22	AN3-3A	BOLT
					20	20	AN3-4A	BOLT
					26	26	AN3-6A	BOLT
					1	1	AN3-12A	BOLT
					92	92	NAS1149F0332P	WASHER (OR AN960-10L)
					34	34	CR3242-4-2	RIVET
					135	135	MS20426AD3-3	RIVET
					140	140	MS20426AD4-3	RIVET
					25	25	MS20470AD3-3	RIVET
					90	90	MS20470AD4-3	RIVET
					24	24	MS21042L3	NUT
					4	4	MS21059L3	NUT PLATE
					34	34	MS21069L3	NUT PLATE
					8	8	MS21069L08	NUT PLATE
					3	3	MS21071L3	NUT PLATE
					1	1	MS21071L08	NUT PLATE
						1	204-030-853-125	LH COPILOT DOOR (204-030-853-137/-155)
1							D412-711-111	WIRING HARNESS, 212/412
^B 1							^B D4268-043	INSTRUMENT PANEL, 212/412 (REPLACES EA20469-15-412)
	1						D205-711-113	WIRING HARNESS, 205
	^B 1						^B D4268-041	INSTRUMENT PANEL, 205 (REPLACES EA20469-15-205)
		1					D204-711-115	WIRING HARNESS, 204
		^B 1					^B EA20469-15-204	INSTRUMENT PANEL, 204
			1				D214-711-117	WIRING HARNESS, 214
			^B 1				^B EA20469-15-214	INSTRUMENT PANEL, 214
				1			D212-711-119	WIRING HARNESS, EAGLE SINGLE
				^B 1			^B D4268-047	INSTRUMENT PANEL, EAGLE SINGLE

- (A) IF CUSTOMER PREFERS TO SUPPLY AND MODIFY THEIR OWN DOOR, D412-711-021 SHOULD BE SUPPLIED IN LIEU OF D412-711-041
(B) INSTRUMENT PANEL INCLUDED WITH HARNESS ABOVE

NOTES

1) WIRING HARNESSES:

For Bell 204/205/210 Wiring Harnesses, use drawing D2046904.
For Bell 212 Wiring Harnesses, use drawing D2046903*.
For Bell 214 Wiring Harnesses, use drawing D214-761-511.
For Bell 412 Wiring Harnesses, use drawing D412-711-901.
For Bell 212 modified per SH07-28/SR02831NY use D212-761-224
or D212-761-225 depending on aircraft s/n.

* Despite the note on the drawing, D2046903 is applicable to all 212 aircraft serial numbers

Wiring Harnesses will vary
depending on aircraft s/n.

2) D412-711-101 REPLACEMENT WINDOW:

To increase downward viewing clarity, it is acceptable to cut a small section from the replacement window on its downward side per Figure 1 of this document. The cutout can be a maximum of 9.00" wide x 17.00" long (229mm x 432mm), measured along the profile of the replacement window. The corners of the cutout must have a minimum radius of 2" (50mm). The cutout should be located at least 1.0" (25mm) from the flange. The actual shape of the cutout can vary as desired, as long as the overall dimensions are within the specified limits. See Figure 1 for reference.

3) D412-711-043 SNAP VENT KIT:

It is acceptable to install a total of up to 2X D3932-1 Snap Vents (available from Dart) onto the D412-711-101 Replacement Window to provide ventilation into the cabin. Refer to Figure 1 for acceptable locations and size of cutouts.

4) It is acceptable to use MS21042L3 nuts to install the window in lieu of anchor nuts shown on D2046901.

APPROVED

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	MB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	DRAWING NO.	REV. L
MFG. APPR.	N/A	D412-711	SHEET 3 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	VERTICAL REFERENCE DOOR	NTS
DATE	17.01.20	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

QTY -011	QTY -013	QTY -015	QTY -017	QTY -019	QTY -021	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
X								D412-711-011	VERTICAL REFERENCE DOOR INSTALLATION, 212/412
	X							D205-711-013	VERTICAL REFERENCE DOOR INSTALLATION, 205/210
		X						D204-711-015	VERTICAL REFERENCE DOOR INSTALLATION, 204
			X					D214-711-017	VERTICAL REFERENCE DOOR INSTALLATION, 214
				X				D212-711-019	VERTICAL REFERENCE DOOR EAGLE SINGLE
					X			D412-711-021	VERTICAL REFERENCE DOOR KIT
A ₁	A ₁	A ₁	A ₁	A ₁		X		D412-711-041	VERTICAL REFERENCE DOOR ASSEMBLY
							X	D412-711-043	SNAP VENT KIT
					1	1		D412-761-043	MODIFIED LATCH MECHANISM KIT, LH (REPLACES EA20469-23/-24/-25)
					1	1		D412-711-101	REPLACEMENT WINDOW (REPLACES EAGLE P/N EB212-100L / EA20469-3)
					1	1		D3802-1-120	RUBBER STRIP
							2	D3932-1	SNAP VENT
					1	1		D4165-1	DOUBLER
					1	1		D4165-3	DOOR INNER SKIN (REPLACES EA20469-18)
					1	1		* D4165-5	AFT RIB (REPLACES EA20469-34)
					1	1		** D4165-7	FWD RIB (REPLACES EA20469-31)
					1	1		D4165-9	ANGLE (REPLACES EA20469-17)
					1	1		D4165-11	DOOR COVER PANEL (REPLACES EA20469-21)
					1	1		D4207-1	WINDOW RETAINER (REPLACES EA20469 -14)
					1	1		D4207-3	WINDOW (REPLACES EA20469-13)
					1	1		* D4269-1	ANGLE (REPLACES EA20469-33)
					1	1		** D4269-3	ANGLE (REPLACES EA20469-30)
					1	1		** D4269-5	ANGLE (REPLACES EA20469-29)
					1	1		* D4269-7	ANGLE (REPLACES EA20469-32)
					1	1		D4324-011	ARM REST ASSEMBLY (REPLACES EA20469-16)
					1	1		D4327-1	ANGLE (REPLACES EA20469-11)
					1	1		D4327-3	ANGLE (REPLACES EA20469-07)
					2	2		D4385-1	PLACARD

* PART OF EA20469-10 REAR RIB ASSEMBLY

** PART OF EA20469-12 FWD RIB ASSEMBLY

APPROVED

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	ML	DRAWING NO.	REV. L
MFG. APPR.	N/A	D412-711	SHEET 2 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	VERTICAL REFERENCE DOOR NTS	
DATE	17.01.20	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	